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## **PART 1 - GENERAL**

### **1.1 GENERAL**

- .1 All drawings and all sections of the specification shall apply to and form an integral part of this section.
- .2 The Air Balance Agency must be a member of the Associated Air Balance Council. (AABC)
- .3 Provide services of independent Balance and Testing Agency which specialises in the balancing and testing of ventilation, hydronic heating systems.

### **1.2 WORK INCLUDED**

- .1 Labour, material, plant, tools, equipment and services necessary for and reasonably incidental to completion of initial balancing and operation of, modified existing heating, hydronic system to suit new vestibules. Balancing of each new supply fan as well as associated hydronic systems water and glycol.
- .2 Include extended service of 90 days, after completion of test and balance work, during which time the Contract Administrator at his discretion may request a re-check or resetting of pump, inlet, outlet, as listed in test report. The agency shall provide technicians to assist the Contract Administrator in making any tests he may require during this period of time.
  - .1 Provide one summer adjustment of systems c/w report.
- .3 The Air Balance and Testing Agency shall work in co-ordination with Section 15600 and 15800 to assure the installation of all manual adjusting dampers and pitot tube enclosures are as required to allow proper adjustment of the air systems as well as pump impeller changes.

### **1.3 RELATED WORK SPECIFIED ELSEWHERE**

- .1 Mechanical General Provisions: Section 15010
- .2 Ventilation + Air Conditioning: Section 15800
- .3 Electrical: Section 16000

### **1.4 REQUIREMENTS AND REGULATORY AGENCIES**

- .1 Shall be a member of the Associated Air Balance Council.
- .2 Testing and balancing personnel shall be experienced and certified in balancing of Mechanical Systems in accordance with AABC procedures.
- .3 Use approved instruments. Include types, serial numbers, and dates of calibration of all instruments used.

### **1.5 DESCRIPTION**

- .1 Work shall not be done until the system has been completed and in full working order. Division 15 shall put all heating systems and equipment into full operation, as the season would demand, and shall continue operation of same during each working day of testing and balancing.
- .2 Air Balance Agency shall supply 3 hard-bound copies of final corrected air balance report for City , c/w certification by Air Balance Agency.
- .3 Final payment will not be issued until the air balance report has been submitted to and approved by the Contract Administrator.

- .4 Provide spot checks of the system if called upon by the Contract Administrator. If quantities, rpm's gpm's etc. do not agree with the submitted report, re-balance the system or systems in question, until satisfactory results are received.

**1.6 TESTING PROCEDURES**

- .1 Installation data, manufacturer and model size, arrangement discharge and class, motor type, Watts, voltage, phase, cycles and full load amps. Location and local identification data.
- .2 Adjust pump to operate within 5% of design. Provide fluid flow rate, operating pressure, pump r/min, motor operating amps, motor power, velocities as well as equipment name plate data.
- .3 System Schematic.
  - .1 Complete system schematic with required actual flow rates at each outlet or inlet (water). Show room numbers and floors.
  - .2 Pump flow quantities: run out to heat exchanger as well as glycol side pressure drops, air and water, quantities at balancing locations design and recorded balances, velocity measurements.
  - .3 After submission of report, perform random check of 20% of inlets and outlets.
  - .4 Provide one copy of completed report to Contract Administrator. After Contract Administrator has reviewed report, Section 15990 shall provide to Contract Administrator sufficient copies of report to insert one in each operating and maintenance manual.

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